CVC230HZ
23X AUTO FOCUS ZOOM COLOR CAMERA

OPERATION / INSTALLATION MANUAL

speco technologies®

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CAUTION

RISK OF ELECTRIC SHOCK
DO NOT OPEN

The lightning flash with an arrowhead symbol, within an equilateral triangle is intended to alert the user to the presence of uninsulated dangerous voltage within the product's enclosure the may be of sufficient to constitute a risk of electric shock to persons.

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

INFORMATION – This equipment has been tested and found to comply with limits for a Class A digital device, pursuant to part 15 of the FCC Rules.

These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment.

This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications.

Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

WARNING – Changes or modifications not expressly approved by the manufacturer could void the user's authority to operate the equipment.

CAUTION - To prevent electric shock and risk of fire hazards :
-Do NOT use power sources other than that specified.
-Do NOT expose this appliance to rain or moisture.

This installation should be made by a qualified service person and Should conform to all local codes.

Features

1. 23X Optical Zoom
- The built-in optical zoom lens is a highly durable component.
  It Features auto focus, auto iris, and zoom functions.

2. SSNR (Super Noise Reduction)
- By using built-in SSNR Function manufactured by MC Electronics, the
  amount of low light noise has been significantly reduced, and
  the signal-to-noise ratio (S/N)

3. Fine Picture Quality under Ultra Low Lighting
- ¼" high density CCD allows the user to capture bright, high-quality
  images under ultra low lighting conditions.

4. High Resolution
- Featuring 550TV line horizontal resolution in color mode and 600TV line
  horizontal resolution in BW mode, the camera features Sony's 410,000
  Pixel CCD and captures clean, noiseless, high-quality images.

5. Day & Night
- The camera automatically determines whether it is night time or day
  time, selecting operating mode automatically. The camera operates in
  color mode during day light conditions and BW mode in night conditions
  for clearer identification.

6. DIS (Digital Image Stabilizer)
- The DIS function can compensate for vibration of the camera. so it
  helps you obtain more stabilized image under the shaking conditions.

7. Motion Detection
- Once motion is detected, the camera sends an alert signal to the
  processing unit, which, if used in conjunction with an optional alarm,
  can provide effective surveillance of your property.

8. Miscellaneous Functions
- Other miscellaneous functions of the camera include privacy zone
  masking, digital zoom, freeze, horizontal inversion, and user-configured
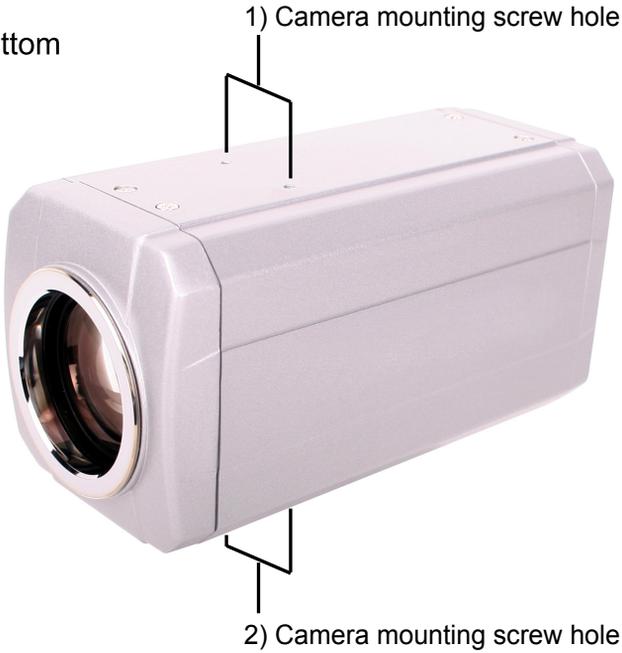 presets.

9. Control via OSD Menu and RS-485
- The OSD menu and RS-485 pins allow for remote control of the camera.
  The user can also directly control the lens using external control connection.

CONTENTS

1. Overview
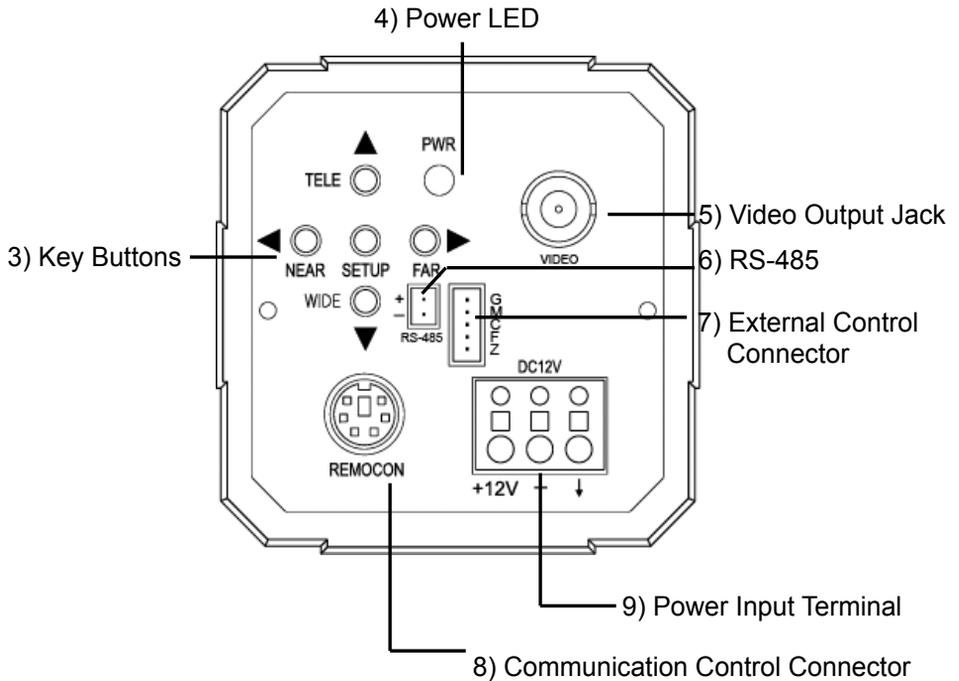
Top / Bottom

1) Camera mounting screw hole

2) Camera mounting screw hole

Back

4) Power LED

3) Key Buttons

5) Video Output Jack

6) RS-485

7) External Control Connector

9) Power Input Terminal

8) Communication Control Connector

1. Top Mounting Bracket Screw Hole
Used to fix tripod mounting bracket on top of the camera.

2. Tripod Mounting Hole
Used to install the camera on an optional tripod.
The tripod must be equipped with screws with specifications shown on the right.

3. Key Buttons
Following buttons control zoom, focus, and auto focus functions.

WIDE button : To widen the view. (ZOOM OUT)
TELE button : To close in on a far object. (ZOOM IN)
F-NEAR button : To see a near object clearly.
F-FAR button : To see a far object clearly.
AF button : To activate auto focus just once.

Pressing the 'SET' button locks the zoom control function of these buttons and prompts the main setup menu.

*The zoom position is saved after 5 seconds when you set zoom function.

Main setup menu can be navigated using these buttons.
SET : To access the main setup menu.

UP (WIDE button) : To Move the arrow indicator to up.
Down (TELE button) : To Move the arrow indicator to down.
LEFT (F-NEAR button) : To Move the arrow indicator to left.
RIGHT (F-FAR button) : To Move the arrow indicator to right.

4. Power LED
Illuminates when power is supplied.

5. Video Output Jack
Used to connect an external video monitor in jack.

6. RS-485
Includes the RS-485 communication pin

7. External Control connector
Relaters to the motion detection output signal.
Zoom and focus functions can be controlled using external signals.

8. Communication Control Connector
Used to connect the Remote Controller (Option).

9. Power Input Terminal
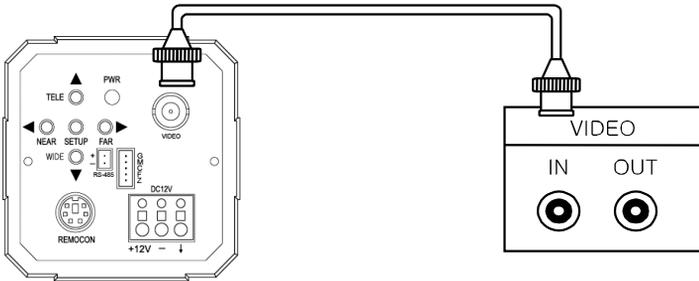Power supply terminal

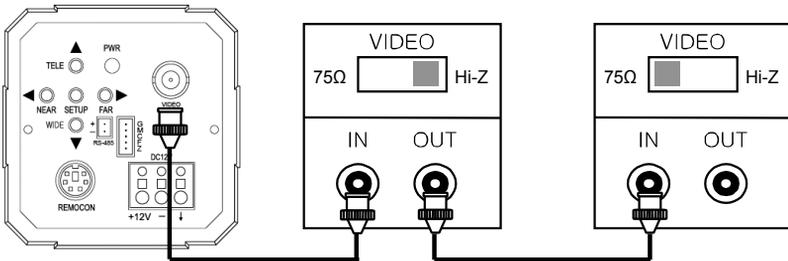# 2. Connection

1) Connecting to Monitor
Connect video out jack to the monitor's video in jack as shown below.

+ Connection methods may vary depending on the video equipment. Please refer to the model specific instruction manual.

+ Connect cables with the unit powered down.

+ Set the 75Ω / Hi-Z selection switch as shown below if you have an intermediate device.

2) Connecting to Power

Each model has a different power input specification.
Please check the model type and standard power requirement before connecting to power.
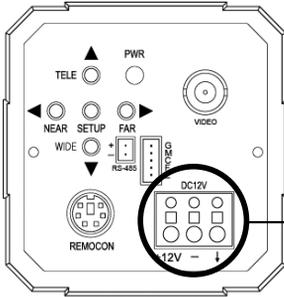
DC Power Type (DC 12V, 500mA)
+ Use DC 12V/500mA power source for camera.

AC Power Type (AC 24V, 500mA)
+ Use AC 24V/500mA power source for camera.

AC 230 Power Type
+ Use AC 230V/500mA power source for camera.
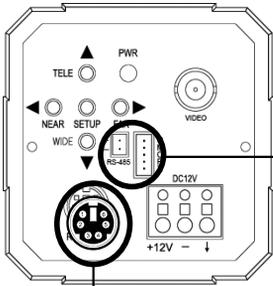
Communication Control connector
+ The camera can be controlled by using external
controllers like a remote controller.
(RS-485 Communication)
External Control connector
Relaters to the motion detection output signal.
Zoom and focus functions can be controlled using
external signals.
G : GND, M : MD, C : COM, F : FOCUS, Z : ZOOM

Connector	Function	Signal Level	I/O
ZOOM	Tele	+6V~+12V / COM	I
	Wide	COM / -6V~-12V	
FOCUS	Far	+6V~+12V / COM	I
	Near	COM / -6V~-12V	
COM		COM	-
MD		+4.0V/+5.0V There is motion / 0V 5±0.5sec / There is no motion	O

+ Communication Control Connector Pin Description.

Number♪	Name♪	Number♪	Name♪
1♪	Right♪	4♪	Auto Focus♪
2♪	Left♪	5♪	Down♪
3♪	Setup♪	6♪	Up♪

3. Operating Your Camera

Menu Configuration

MAIN SETUP MENU			
CAM TITLE	OFF	ON	
WHITE BALANCE	ATW(OUTDOOR)	AWC→SET	MANUAL
BACKLIGHT	OFF HIGH	LOW	MIDDLE
MOTION DET	OFF		
FOCUS	MODE ZOOM SPEED DISP ZOOM MAG LENS INIT	ZOOM TRK D-ZOOM ZOOM POS INIT END	
EXPOSURE	BRIGHTNESS AGC END	IRIS SSNR	SHUTTER SENS-UP
SPECIAL	USER PRESET DAY/NIGHT COMM ADJ	PRIVACY DIS IMAGE ADJ	SYNC END
RESET			
EXIT			

Menu Setup

Use the six buttons on back of the camera
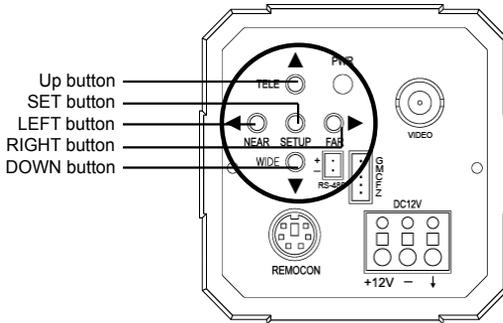
1. Press the SET button to access the main setup mode.
   - Main setup menu is displayed on the monitor screen


```
                    MAIN SETUP

  ▶ CAM TITLE        OFF
    WHITE BAL        ATW ◀┘
    BACKLIGHT        OFF
    MOTION DET       OFF
    FOCUS ◀┘
    EXPOSURE ◀┘
    SPECIAL ◀┘
    RESET
    EXIT
```
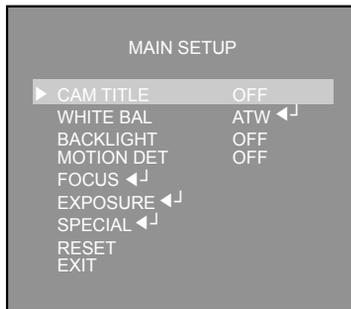
2. Select the desired feature using the UP or DOWN button.
   - Each pressing of the UP or DOWN button moves the indicator to the nest or previous feature.
   - Move the arrow indicator to the desired feature item.

Select feature using the UP or DOWN button.

Change the status using the LEFT or RIGHT button.


```
                    MAIN SETUP

  ▶ CAM TITLE        OFF
    WHITE BAL        ATW ◀┘
    BACKLIGHT        OFF
    MOTION DET       OFF
    FOCUS ◀┘
    EXPOSURE ◀┘
    SPECIAL ◀┘
    RESET
    EXIT
```
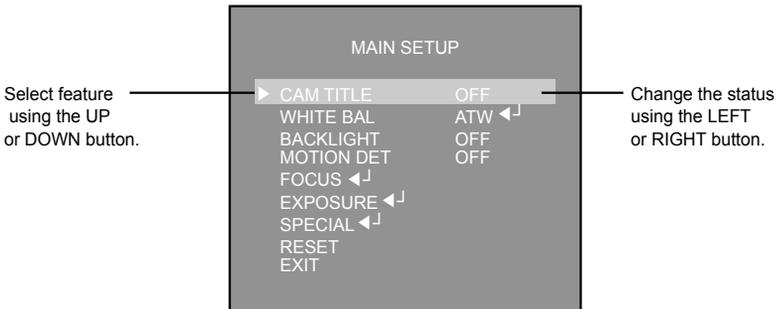
3. Change the status of the selected feature using the LEFT or RIGHT button.

4. When completed, move the arrow indicator to 'EXIT' and press the SET button.

> **Note**
>
> Features marked with a ◀↵ have an accessible submenu.
> Access the submenu by pressing the SET button.

Cam Title

Use this feature to designate a name for the camera, which will display on the monitor screen.

1. Press the SET Button to display the main setup menu and move the arrow indicator to 'CAM TITLE' using the UP or DOWN button.
2. Set 'CAM TITLE' to ' ON' using the LEFT or RIGHT button.

> **Note**
>
> If the CAM TITLE feature is set to 'OFF' The name will not displayed in the monitor.
>
> ```
>              MAIN SETUP
>
>  ▶  CAM TITLE         OFF
>     WHITE BAL         ATW ◀↵
>     BACKLIGHT         OFF
>     MOTION DET        OFF
>     FOCUS ◀↵
>     EXPOSURE ◀↵
>     SPECIAL ◀↵
>     RESET
>     EXIT
> ```

3. Press SET button.

```
        CAM TITLE SETUP

     ABCDEFGHIJKLMNO
     PQRSTUVWXYZabcd
     e f g h i j k l m n o p q r s
     Tuvwxyz01234567
     89(  ) <  > - / # ! ? , .

     ←  →  CLR  POS  END
```
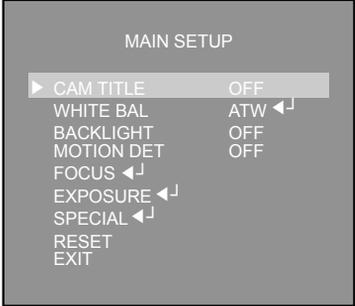
4. You can enter up to 20 characters.

1) Move the cursor to the character entry field using the LEFT or RIGHT button.

2) Use UP, DOWN, LEFT, and RIGHT buttons to select a desired character.

```
        CAM TITLE SETUP

        ABCDEFGHIJKLMNO
        PQRSTUVWXYZabcd
        e f g h i j k l m n o p q r s
        Tuvwxyz01234567
        89(  ) <  > - / # ! ? , .

        ←  →  CLR  POS  END
```

3) Press the SET button to confirm selection of the blinking character. The character is then saved, and the cursor in the entry field moves to the next position.

4) Repeat steps 1) through 3) until the desired name has been entered.

Note

Correcting Mistakes
Move the cursor to 'CLR' and press the SET button to clear the entire entry.
To modify one character, use ← or → to position the cursor above the character to be modified and click the SET button after selecting the character to enter.

---

5. Select on screen position of the CAM TITLE.
1) Move the cursor to 'POS' and press SET button.

```
        CAM TITLE SETUP

        ABCDEFGHIJKLMNO
        PQRSTUVWXYZabcd
        e f g h i j k l m n o p q r s
        Tuvwxyz01234567
        89(  ) <  > - / # ! ? , .

        ←  →  CLR  POS  END
```

2) The CAM TITLE is displayed on the top-left of the monitor screen. (Default position)

3) Select the position by using the 4-directional buttons, then press the SET button to confirm the position.

6. When completed, move the cursor to 'END' and press SET button.

White Balance Control

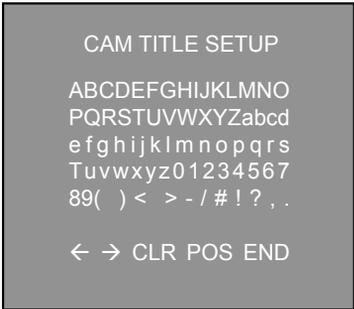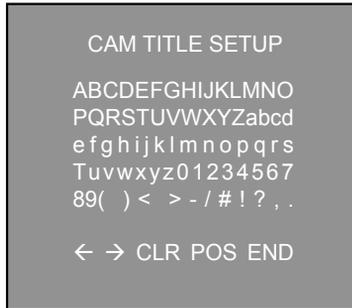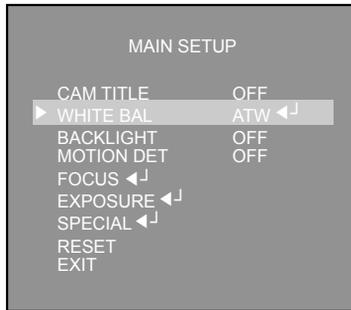Your camera provides three 'WHITE BAL' control modes for your choosing in Adjusting the white balance.

1. Press the SET button to access the main setup menu and move the indicator to 'WHITE BAL' using the UP or DOWN button.

2. Set 'WHITE BAL' using the LEFT or RIGHT button.

```
                    MAIN SETUP

        CAM TITLE           OFF
    ▶   WHITE BAL           ATW ◀┘
        BACKLIGHT           OFF
        MOTION DET          OFF
        FOCUS ◀┘
        EXPOSURE ◀┘
        SPECIAL ◀┘
        RESET
        EXIT
```

The three white balance control modes are as follows :

◈ ATW (Auto Tracking White Balance) :
 - OUTDOOR : This mode can be used within the color temperature
        range 1,800~10,500K
          (Ex: fluorescent light, outdoor, sodium vapor lamp or inside tunnels)
 - INDOOR : This mode can be used within the color temperature range
        3,000K~10,500K
◈ AWC (Auto White balance Control) :
  The white balance is automatically adjusted in a specific environment. In
  order to obtain the best result, press the SET button while the camera
  focuses
◈ Manual :
  To fine adjust, select the Manual mode. You can increase or decrease
  the red or blue factor while monitoring the difference on the screen. Set to
  'MANUAL' mode and press the SET button. Increase or decrease the
  value for red (R-Gain) and blue (B-Gain), watching the color of the picture,
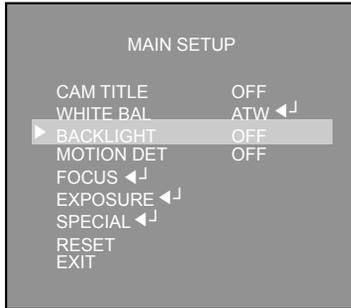 and press the SET button when you obtain the best color.

Note

Proper White Balance may not be obtained under the following conditions.
1) When the scene contains mostly high color temperature object, such as a blue
   sky or sunset.
2) When the scene is dim.
3) If your camera directly faces a fluorescent lamp or is used in an environment
   of varying lighting conditions.

Backlight

When there is a strong backlight behind the object, clear images of the background as well as the object can still be obtained by using the BACKLIGHT function.

1. Please position the arrow to point to 'BACKLIGHT' on the SETUP menu by using the UP and DOWN buttons.
2. Please select the mode you wish to operate by pressing the LEFT or RIGHT button.

```
            MAIN SETUP

     CAM TITLE        OFF
     WHITE BAL        ATW ◄┘
  ►  BACKLIGHT        OFF
     MOTION DET       OFF
     FOCUS ◄┘
     EXPOSURE ◄┘
     SPECIAL ◄┘
     RESET
     EXIT
```

◈ HIGH/MIDDLE/LOW: You can adjust the sensitivity of Backlight Compensation.
◈ OFF: BACKLIGHT function does not operate.

Motion Detection

This product has a feature that allows you to observe movement of objects in 4 different areas on the screen, and the words 'MOTION DETECTED' appear on the screen when movement is detected; hence a single individual can conduct supervision efficiently, The camera detects an object's movement by sensing disparity of outline, and level of brightness and color. The camera receives detection signal from MD output terminal.
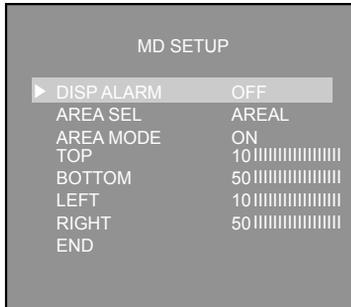
```
            MD SETUP

  ►  DISP ALARM       OFF
     AREA SEL         AREAL
     AREA MODE        ON
     TOP              10 IIIIIIIIIIIIIIIIII
     BOTTOM           50 IIIIIIIIIIIIIIIIII
     LEFT             10 IIIIIIIIIIIIIIIIII
     RIGHT            50 IIIIIIIIIIIIIIIIII
     END
```

+ Please press the SETUP button.
  - OFF : MOTION DETECTION mode is cancelled.
  - ON : Any motion in the selected areas is observed.
+ Please press the SETUP button.
  - OFF : MOTION DETECTION mode is cancelled.
  - ON : Any motion in the selected areas is observed.
+ Please select the area you wish to observe from the 4 areas in AREA SEL mode.
+ Please select ON mode for the chosen area.
+ Please adjust the size of the area to be observed by using the UP, DOWN, LEFT or RIGHT button.
+ Please press the SETUP button to save changes and complete the setting.

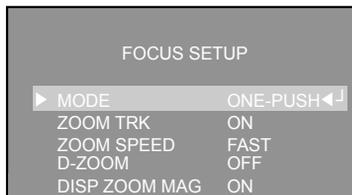## FOCUS

```
                MAIN SETUP

      CAM TITLE        OFF
      WHITE BAL        ATW ◀┘
      BACKLIGHT        OFF
      MOTION DET       OFF
   ▶  FOCUS ◀┘
      EXPOSURE ◀┘
      SPECIAL ◀┘
      RESET
      EXIT
```
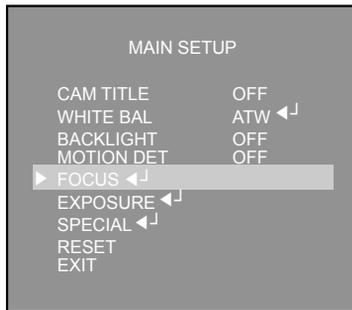
1. Press the SET button to access the main setup menu and then position the indicator over FOCUS using the UP or DOWN button.
2. Press the SET button.

→MODE: You can select the most suitable zoom mode. Move the arrow indicator to 'MODE' using UP or DOWN button.

```
               FOCUS SETUP

   ▶  MODE            ONE-PUSH◀┘
      ZOOM TRK        ON
      ZOOM SPEED      FAST
      D-ZOOM          OFF
      DISP ZOOM MAG   ON
```

+ AUTO: Select auto and press the SET button to confirm. Increase or decrease optical zoom (ZOOM) or digital zoom (D-ZOOM) positions using the UP or DOWN button while verifying the changes on screen. Enabling D-ZOOM(ON) means that digital zoom will activate once optical zoom ends. Focus is automatically adjusted with moving zoom.

+ ONE PUSH: Focus is automatically adjusted just once, after zoom position is changed. Select 'ONE PUSH' and press the SET button to conf irm. Increase or decrease optical zoom (ZOOM) or digital zoom (D-ZOOM) positions using the directional buttons while verifying the changes on screen. Press the SET button once desired ima ge quality is obtained.

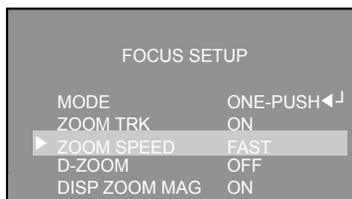+ MANUAL: Select 'MANUAL' and press the SET button to confirm. Increase or decrease optical zoom (ZOOM) or digital zoom (D-ZOOM) p ositions using the directional buttons while verifying the changes on screen. Press the SET button once desired image quality is obtained. Focus can be manually adjusted, independent of movi ng zoom.

→ZOOM TRK: You can select to use 'ZOOM TRK'. Move the arrow indicator to 'ZOOM TRK' using UP or DOWN button. Set 'ZOOM TRK' to on using LEFT or RIGHT button.

```
                FOCUS SETUP

    MODE              ONE-PUSH◀┘
  ▶ ZOOM TRK          ON
    ZOOM SPEED        FAST
    D-ZOOM            OFF
    DISP ZOOM MAG     ON
```
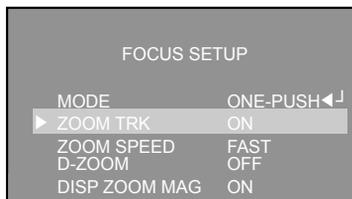
Configure zoom tracing speed using this feature. Position the indicator over 'ZOOM SPEED' using the UP or DOWN button and then set to desired mode using the LEFT or RIGHT butto n

```
                FOCUS SETUP

    MODE              ONE-PUSH◀┘
    ZOOM TRK          ON
  ▶ ZOOM SPEED        FAST
    D-ZOOM            OFF
    DISP ZOOM MAG     ON
```
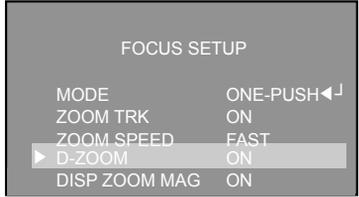
* FAST : To move zoom fast.   * SLOW : To move zoom slowly.
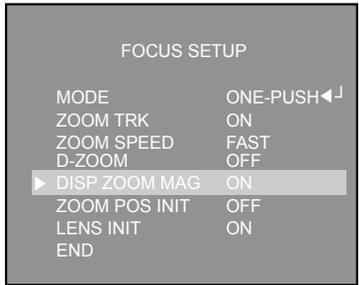

Note

The 'ZOOM SPEED' mode cannot be used if 'MODE' is set to 'A UTO' and 'ZOOM TRK' is 'ON'.

→D-ZOOM :Configure magnification limit from x2~x10 using this feature. Position the indicator over 'D-ZOOM' using the UP or DOWN button. Set 'D-ZOOM' to 'ON' and press the SET button to confirm.

```
              FOCUS SETUP

     MODE            ONE-PUSH◄┘
     ZOOM TRK        ON
     ZOOM SPEED      FAST
   ► D-ZOOM          ON
     DISP ZOOM MAG   ON
```

Set 'ZOOM LIMIT' to the desired level using the LEFT or RIGHT button.

→DISP ZOOM MAG:Use this feature to display the current zoom magnification level on screen. Position the indicator over 'DISP ZOOM MAG' using the UP or DOWN button. Then set to ON using the LEFT or RIGHT button.

```
              FOCUS SETUP

     MODE            ONE-PUSH◄┘
     ZOOM TRK        ON
     ZOOM SPEED      FAST
     D-ZOOM          OFF
   ► DISP ZOOM MAG   ON
     ZOOM POS INIT   OFF
     LENS INIT       ON
     END
```

→ZOOM POS INIT:Moves to the controlled ZOOM position when the power turned on and is a function of the initial ZOOM position control

```
              FOCUS SETUP

     MODE            ONE-PUSH◄┘
     ZOOM TRK        ON
     ZOOM SPEED      FAST
     D-ZOOM          OFF
     DISP ZOOM MAG   ON
   ► ZOOM POS INIT   ON
     LENS INIT       ON
     END
```
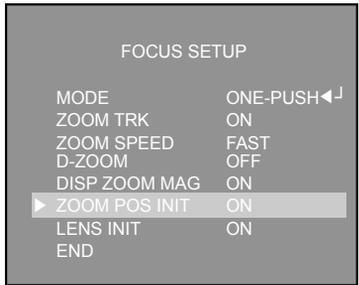
→LENS INIT: Use this feature to initialize the lens. Position the indicator over L ENS INIT. Using the UP or Down button. Press the SET button to confirm.

```
              FOCUS SETUP

   MODE              ONE-PUSH◄┘
   ZOOM TRK          ON
   ZOOM SPEED        FAST
   D-ZOOM            OFF
   DISP ZOOM MAG     ON
   ZOOM POS INIT     OFF
 ▶ LENS INIT         ON
   END
```
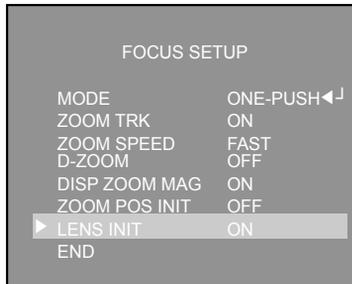
→END: To revert to the main setup menu.

EXPOSURE

```
            EXPOSURE SETUP

 ▶ BRIGHTNESS        50 ............
   IRIS              AUTO
   SHUTTER           ---
   AGC               MIDDLE
   SSNR              MIDDLE
   SENS-UP           AUTO ◄┘
   END
```
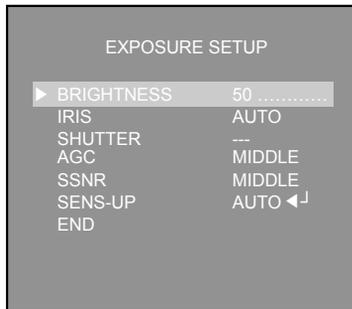
1. Press the SET button to access the main setup menu and then position the indicator over 'EXPOSURE' using the UP or DOWN button.
2. Press the SET button to confirm.

→BRIGHTNESS: Use this feature to adjust image brightness. Position the in dicator over 'BRIGHTNESS' using the UP or DOWN button . Then increase or decrease brightness level using the LEF T or RIGHT button while verifying the changes on screen. Set END once desired level is obtained.

```
            EXPOSURE SETUP

 ▶ BRIGHTNESS        50 ............
   IRIS              AUTO
   SHUTTER           ---
   AGC               MIDDLE
   SSNR              MIDDLE
   SENS-UP           AUTO ◄┘
   END
```
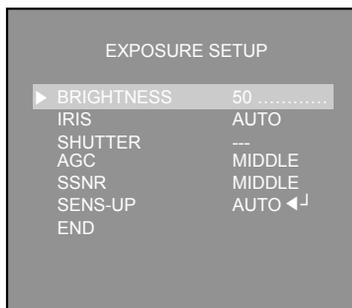
→IRIS: Set 'IRIS' to 'AUTO' or 'MANUAL'. Position the indicator over 'IRIS' using the UP or DOWN button and then select the desired iris mode using the LEFT or RIGHT button.

```
            EXPOSURE SETUP

   BRIGHTNESS        50 …………
 ▶ IRIS              AUTO
   SHUTTER           ---
   AGC               MIDDLE
```
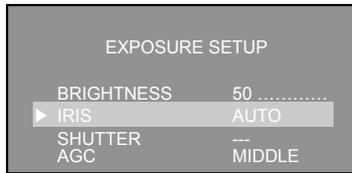
-AUTO : The iris is automatically activated upon illumination.
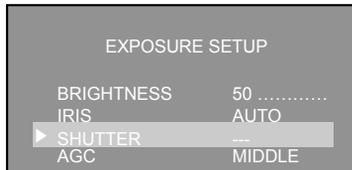
-MANUAL : Manual iris configuration. Set 'IRIS' to 'MANUAL' using
          the LEFT or RIGHT button and then press the SET button.
          Increase or decrease iris level using the LEFT or RIGHT
          button while verifying the changes on screen.

→SHUTTER: Control image brightness by adjusting shutter speed.
   1. Position the indicator over 'SHUTTER' using the UP or DOWN button.
      Then select the desired shutter mode (A.FLK, ESC, MANUAL) using
      the LEFT or RIGHT button

```
            EXPOSURE SETUP

   BRIGHTNESS        50 …………
   IRIS              AUTO
 ▶ SHUTTER           ---
   AGC               MIDDLE
```

   - **A.FLK (NTSC: 1/100, PAL: 1/120):** Flicker-free mode
   - **ESC:** Automatic shutter speed setting (optimal)
   - **MANUAL:** Manual shutter speed setting

   2. If you choose 'MANUAL', select the optimal shutter speed.
      In MANUAL mode, the optimal shutter speed needs to be designated.
      Select from 1/60 to 1/120,000(NTSC) or from 1/50 to 1/120,000 (PAL)
      * 'Sens-up' mode con be configured manually (2x to 128x).
        Verify changes made to the shutter speed by referencing to changes in on screen
        brightness.
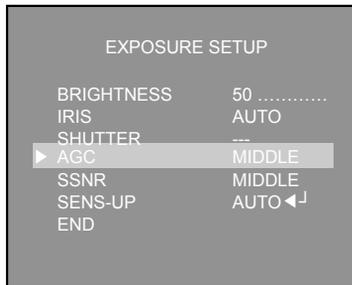
   3. Press the SET button to complete.

Note

 - Image may become unstable if the camera is set to 'ESC' mode and faces a strong
   fluorescent light.
 - Under 'ESC' mode, the brightness can be adjusted using the LEFT or RIGHT
   button.
 - Sens-up is disabled under 'MANUAL' or 'A.FLK' mode.

→AGC (Auto Gain Control) : For brighter images.

   1. Position the indicator over 'AGC' using the UP or DOWN button.
   2. Set 'AGC' to the desired mode using the LEFT or RIGHT button.
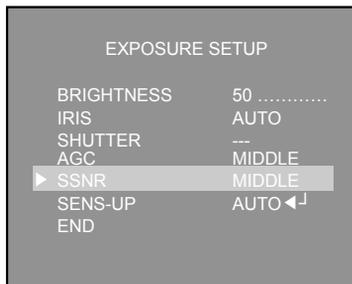
    - **HIGH**   : Wide range gain value adjustment
    - **MIDDLE** : Middle range gain value adjustment
    - **LOW**   : Narrow range gain value adjustment
    - **OFF**   : Disabled

```
              EXPOSURE SETUP

      BRIGHTNESS        50 …………
      IRIS              AUTO
      SHUTTER           ---
  ►   AGC               MIDDLE
      SSNR              MIDDLE
      SENS-UP           AUTO ◄┘
      END
```

→SSNR (Super Noise Reduction) : On screen noise reduction.

   1. Position the indicator over 'SSNR' using the UP or DOWN button.
   2. Set 'SSNR' to the desired mode using the LEFT or RIGHT button.

    - **LOW**   : Low noise reduction
    - **MIDDLE** : Medium noise reduction
    - **HIGH**   : High noise reduction
    - **OFF**   : Disabled

```
              EXPOSURE SETUP

      BRIGHTNESS        50 …………
      IRIS              AUTO
      SHUTTER           ---
      AGC               MIDDLE
  ►   SSNR              MIDDLE
      SENS-UP           AUTO ◄┘
      END
```
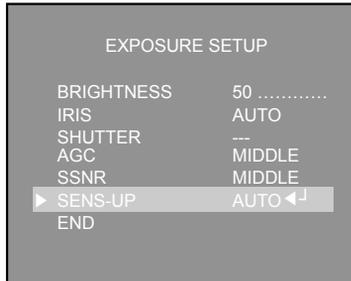

Note

  - Changing 'AGC' setting from LOW to HIGH results in greater sensitivity, as well as
    on screen noise.
  - Setting 'AGC' to OFF locks 'SSNR' configuration.

→SENS-UP : This feature ensures clear images at night or under low lighting conditions.

1. Position the indicator over 'SENS-UP' using the UP or DOWN button.
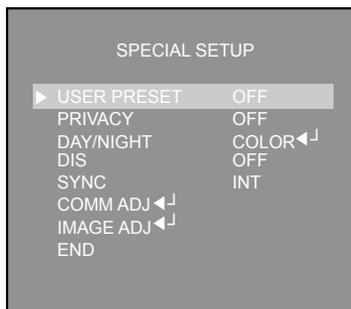2. Set 'SENS-UP' to the desired mode using the LEFT or RIGHT button.

- **AUTO** : Select this mode for use in night time or under low lighting conditions.
- **OFF** : Disabled

```
                EXPOSURE SETUP

     BRIGHTNESS          50 …………
     IRIS                AUTO
     SHUTTER             ---
     AGC                 MIDDLE
     SSNR                MIDDLE
   ▶ SENS-UP             AUTO◀┘
     END
```

Note

- Once 'AUTO' mode is set, the user can configure Sens-Up limit by increasing / decreasing the shutter speed (e.g.: x2,….,x32, x64, 128)
- Enabling Sens-Up increases camera sensitivity and may result in additional noise and/or other phenomenon. This is normal.

SPECIAL

```
                SPECIAL SETUP

   ▶ USER PRESET         OFF
     PRIVACY             OFF
     DAY/NIGHT           COLOR◀┘
     DIS                 OFF
     SYNC                INT
     COMM ADJ◀┘
     IMAGE ADJ◀┘
     END
```
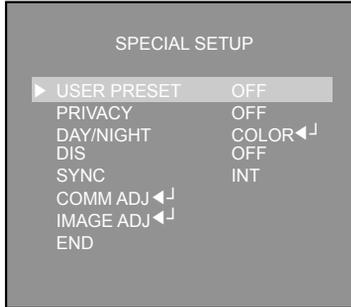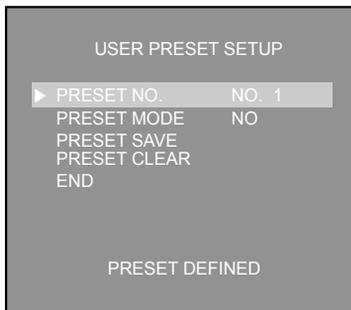
1. Press the SET button to access the main setup menu and then position the indicator over 'SPECIAL' using the UP or DOWN button.
2. Press the SET button to confirm.

→USER PRESET:

Preset user-Designated configurations using this feature. Position the indi
cator over 'USER PRESET' using the UP or DOWN button and then set to
'ON' using the LEFT or RIGHT button. Press the SET button to confirm.

```
                 SPECIAL SETUP

  ► USER PRESET       OFF
    PRIVACY           OFF
    DAY/NIGHT         COLOR◄┘
    DIS               OFF
    SYNC              INT
    COMM ADJ ◄┘
    IMAGE ADJ ◄┘
    END
```

- PRESET NO : Up to eight different preset configurations are supported.

```
               USER PRESET SETUP

  ► PRESET NO.        NO.  1
    PRESET MODE       NO
    PRESET SAVE
    PRESET CLEAR
    END



             PRESET DEFINED
```

- PRESET MODE : Configure initial settings under FOCUS, EXPOSURE, etc.

```
             USER PRESET MODE SETUP

    FOCUS ◄┘

    EXPOSURE ◄┘

    ETC ◄┘

    END
             PRESET DEFINED
```
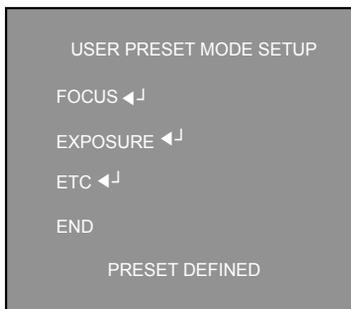
- PRESET SAVE : Save configured preset.

```
        USER PRESET SETUP

  PRESET NO.        NO.  1
  PRESET MODE       NO
▶ PRESET SAVE
  PRESET CLEAR
  END


        PRESET DEFINED
```
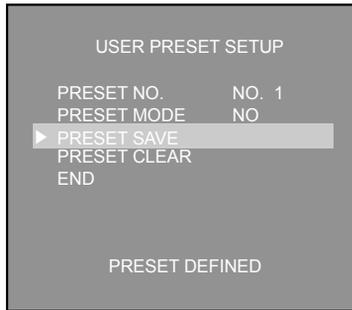
- PRESET CLEAR : Clear configured preset.

```
        USER PRESET SETUP

  PRESET NO.        NO.  1
  PRESET MODE       NO
  PRESET SAVE
▶ PRESET CLEAR
  END


        PRESET DEFINED
```
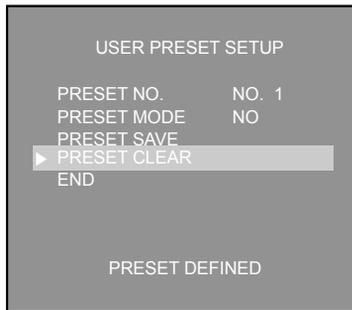
- END : Revert to the SPECIAL SETUP menu.

```
        USER PRESET SETUP

  PRESET NO.        NO.  1
  PRESET MODE       NO
  PRESET SAVE
  PRESET CLEAR
▶ END


        PRESET DEFINED
```
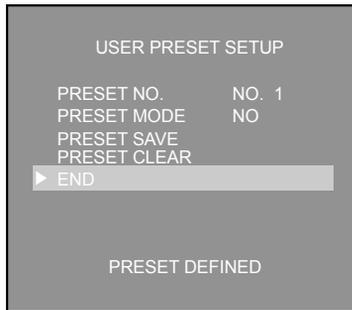
→PRIVACY : Mask privacy area using this feature. The mask area expand / contract upon the zoom position.

```
        SPECIAL SETUP

  USER PRESET       OFF
▶ PRIVACY           OFF
  DAY/NIGHT         COLOR◀┘
  DIS               OFF
```

- **GROUP SEL**   : Choose up to eight groups. Each group can consist of four mask areas.
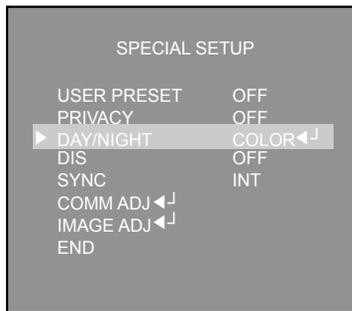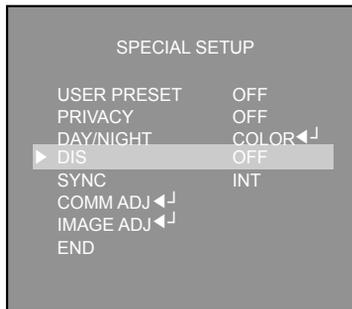- **MASK COLOR** : Adjust desired mask color level.
- **AREA SEL**   : Configure eight mask areas.
- **AREA MODE**   : Mask area display.
- **TOP**   : To move the mask area up.
- **BOTTOM**   : To move the mask area down.
- **LEFT**   : To move the mask area left.
- **RIGHT**   : To move the mask area right.

→DAY/NIGHT : Select from COLOR, BW or AUTO modes.

```
            SPECIAL SETUP

    USER PRESET      OFF
    PRIVACY          OFF
  ▶ DAY/NIGHT        COLOR◀┘
    DIS              OFF
    SYNC             INT
    COMM ADJ◀┘
    IMAGE ADJ◀┘
    END
```

- **COLOR**   : Color mode.
- **B/W**   : BW mode.
- **AUTO**   : The camera automatically detects lighting conditions and selects the mode accordingly.

→DIS : The DIS mode can compensate for vibration of the camera.

```
            SPECIAL SETUP

    USER PRESET      OFF
    PRIVACY          OFF
    DAY/NIGHT        COLOR◀┘
  ▶ DIS              OFF
    SYNC             INT
    COMM ADJ◀┘
    IMAGE ADJ◀┘
    END
```

Note

- When DIS is operating, D-ZOOM does not operate.

→**SYNC :** Two synchronization modes are presented,
INTERNAL and EXTERNAL LINE-LOCK.
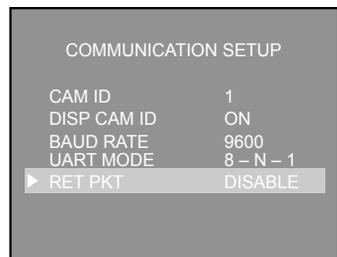EXTERNAL LINE-LOCK mode is not available at the moment.
Needed to be upgraded.

```
               SPECIAL SETUP

       USER PRESET      OFF
       PRIVACY          OFF
       DAY/NIGHT        COLOR◄┘
       DIS              OFF
   ▶   SYNC             INT
       COMM ADJ◄┘
       IMAGE ADJ◄┘
       END
```
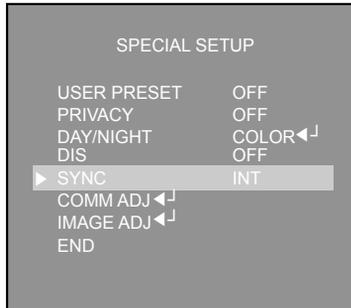
- **INT** : Internal synchronization.
- **LL** : External line-lock synchronization.
  It is not available at the moment.
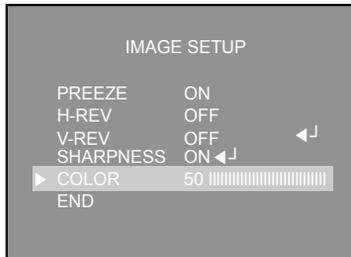
Note

- The LINE-LOCK mode is not available at the moment.

→**COMM ADJ :** Use this feature to select communication protocol
(refer to p.46~p.51 for details).
Position the indicator over 'COMMUNICATION' using the UP
or DOWN button.

- **CAM ID** : Assign an ID number to the camera (1 to 255)
Identification number zero is used for Remote controller setup.

- **DISP CAM ID** : Displays camera ID on top left
corner of the screen.

- **BAUD RATE** : Configure baud rate from 2400 /
4800 / 9600 / 19200 / 38400 /
57600 bps.

- **UART MODE** : Configure parity bit to NON, EVEN,
or ODD, Data bit is set to 8bit, and
stop bit to 1bit. Set the UART
MODE to EVEN if using the
Remote Controller.

- **UART MODE** : Used to transfer a packet.

- **END**

```
          COMMUNICATION SETUP

       CAM ID           1
       DISP CAM ID      ON
       BAUD RATE        9600
       UART MODE        8 – N – 1
   ▶   RET PKT          DISABLE
```

→**IMAGE ADJ :** Includes image quality or special function factors.

```
              IMAGE SETUP

     PREEZE       ON
     H-REV        OFF
     V-REV        OFF        ◄┘
     SHARPNESS    ON ◄┘
   ► COLOR        50 |||||||||||||||||||||||||
     END
```

- **FREEZE**   : Use this feature to freeze capture an image.
- **H-REV**   : Use this feature to horizontally inverse the screen.
- **V-REV**   : Use this feature to vertically inverse the screen.
- **SHARPNESS** : Increasing this value sharpens object edges. Too high of a setting,
                    however, produces noise and may obscure the image.
- **COLOR**   : Adjusting this value affects the chroma level only; the burst level is
                    unaffected.

→**END :** Evert back to the USER PRESET menu.

RESET

To reset your camera to factory default condition.

EXIT

To finish setup menu.

10. SPECIFICATIONS

MODEL	CVC652HZ 23X COLOR ZOOM CAMERA	
Signal Format	NTSC	PAL
Scanning System	2 : 1 Interlace	
Pick-Up Device	1/4" Color Sony™ Super-HAD CCD	
Total Pixels Number	811 (H) x 508 (V)	795 (H) x 596 (V)
Picture Element	768 (H) x 494 (V)	752 (H) x 582 (V)
S/N Ratio	50dB (AGC Off, Weight On)	
Horizontal Resolution	Color : 550TV Lines, B/W : 600TV Lines	
Lens	23X Zoom, f=3.84 to 88.4mm	
Min. Focus Distance	1000mm	
D. Zoom	OFF/ON (Limit 10X)	
Angle field of view	H : Appr. 58.0˚ (Wide) to 2.22˚ (Tele) V : Appr. 44.8˚ (Wide) to 1.68˚ (Tele)	
Minimum Illumination	0.6 Lux (50 IRs) F1.6	
	0.1 Lux (B/W)	
	0.004 Lux (Sense-up mode)	
Digital Zoom Ration	ON / OFF (Limit 10x)	
Sync Scanning System	2:1 Interlace	
Sync Synchronization	Internal	
Frequency	Horizontal:15,734KHz / Vertical : 59.94Hz	Horizontal:15,625KHz / Vertical : 50.00Hz
OSD (On Screen Display)	OSD On / Off	
Camera Title	ON/OFF (Displayed 20 characters)	
Camera ID	255 ID Selectable	
Video Output	CVBS : 1.0Vp.p / 75Ω	
Camera Control	RS-485 (2400,4800,9600,19200,38400,57600bps)	
Day & Night	Auto/Color/ B/W (ICR type)	

10. SPECIFICATIONS

MODEL	CVC652HZ 23X COLOR ZOOM CAMERA	
Gain Control	Low, Middle, High, OFF Selectable	
White Balance	ATW (INDOOR (3,000~10500K),OUTDOOR (1,800~10,500K)) / AWC / MANUAL	
Electronic shutter speed	Auto/Manual (X128 ~ 1/60sec. ~ 1/120,000 sec.) Sense-up Limit is selectable	Auto/Manual (X128 ~ 1/50sec. ~ 1/120,000 sec.) Sense-up Limit is selectable
OSD	Built-in	
Motion Detection	ON/OFF (Built-in alarm output connector)	
SSNR	Low / Middle / High / Off Selectable (Noise Control)	
Focus	Auto / Manual / One Push	
Zoom Movement Speed	5.2 Sec : Wide to Tele	5.4 Sec : Wide to Tele
Lens Initialize	Built-in	
Preset	8-Positions	
DIS	ON/OFF	
Privacy Function	On/Off (32 Zones, 8 Groups / 4 Programmable Zones per Screen)	
FLIP	LEFT / RIGHT, UP / DOWN	
FREEZE	ON/OFF	
IRIS Control	Auto / Manual	
Operation Temperature / Humidity	-10 ~ 50°C / 30% to 90% RH	
Supplied Voltage	DC12V ±10% , Max 5W	
Power Consumption	Max. 4.8W (500mA)	
Option	Remote Controller (RS-485 type)	